Model #480742

DIGITAL INFRARED THERMOMETER

CAREFULLY READ THROUGH THE ENTIRE OWNER'S MANUAL
BEFORE OPERATING YOUR DIGITAL INFRARED THERMOMETER.
KEEP MANUAL WITH IMPORTANT RECORDS FOR
SAFETY INSTRUCTIONS, OPERATING PROCEDURES AND WARRANTY.

Please retain these instructions for future reference.
If you encounter any problems or difficulties,
please contact our toll free Customer Service Department at:
1-800-423-3598
1-310-522-9008 (California only)
1-310-522-9066 Fax

ALLTRADE®
1431 VIA PLATA
LONG BEACH, CA 90810-1462
www.alltradetools.com

FOR CUSTOMER SERVICE
1-800-423-3598

SPECIFICATIONS: GENERAL	
Display	4 digit LCD display
Measurement Ranges	-40˚C to 500˚C (-40˚F to 932˚F) with 0.1˚C (32.18˚F) resolution
Sample rate	Approximately 1 second
Laser power	<1mW output at 675µm wave length. (Class II laser product)
Storage Temperature	-20˚C to 50˚C (-4˚F to 122˚F)
Operating Temperature	0˚C to 50˚C (32˚F to 122˚F)
Operating Humidity	Max. 80%
Power Supply	One 9V battery (included)
Power Current	Approximately 12mA DC
Weight	140 grams (6.4 ounces)
Size	1.75” W x 3.25” D x 6” H (4.45 cm x 8.26 cm x 15.24 cm)
SPECIFICATIONS: EQUIPMENT	
Range	-40˚C to 500˚C (-40˚F to 932˚F)
Resolution	0.1˚C (32.18˚F)
Accuracy	+/- 2% of reading or +/-4˚F (2˚C) whichever is greater
Emissivity Settings	Three points selectable: 0.85, 0.90, 0.95
Distance Factor	D/S =10:1 (D = distance, S=spot)
Wavelength	675 µm

Congratulations on your purchase of the Digital Infrared Thermometer! Your Digital Infrared Thermometer is fitted with optical filters that allow you to safely take infrared surface temperature readings when contact with the object is not an option. Its convenient laser targeting and high distance-to-spot ratio gives you the flexibility to take accurate temperatures of hard to read objects.

SAFETY & WARNINGS

The Digital Infrared Thermometer is a laser device and should be used with caution and care. Please observe the following guidelines when using this device.

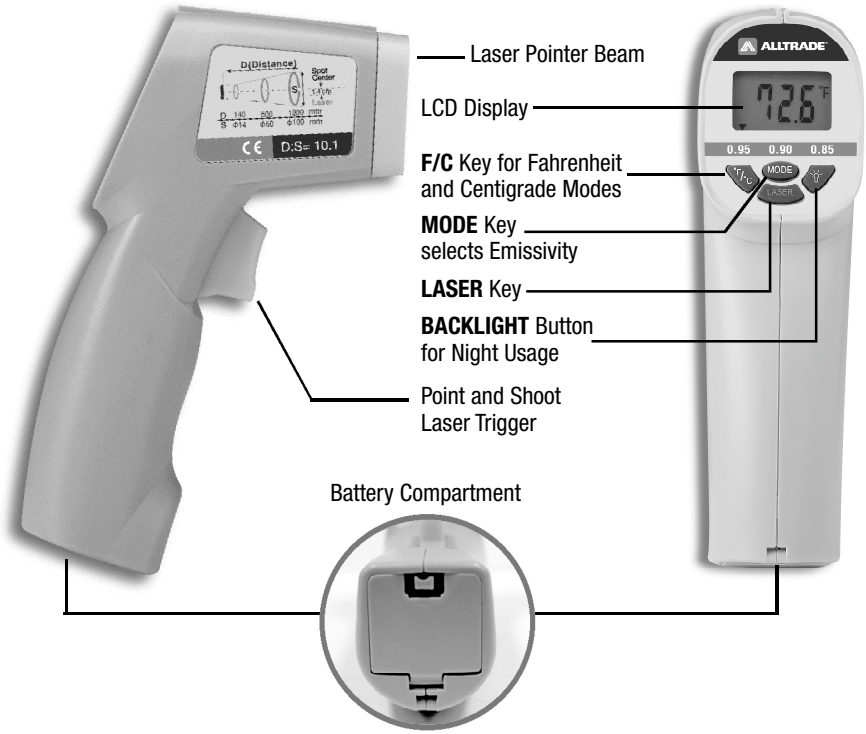
- Infrared thermometers only measure surface temperature. Therefore when used in food applications, critical temperatures must be verified with an internal temperature-measuring device.
- Do NOT look directly at the infrared beam, or point the beam directly into anyone’s eye(s).
- Do NOT look at the infrared beam from a reflective surface (i.e., mirror, polished metal, etc).
- Pay attention to your senses. If you feel a burning sensation, turn off the Digital Infrared Thermometer immediately.
- Do NOT use near any sources of strong electromagnetic radiation or static electrical charge. Doing so may cause errors.
- Do NOT direct the laser towards any source of bright or strong light (i.e., the sun, lamps, etc). Doing so may damage the sensor.
- If the device experiences significant changes in the ambient temperature, allow at least 20 minutes for temperature stabilization before taking a new measurement.
- Do NOT allow the lens to come into direct contact with anything. Doing so may scratch or damage the lens surface which may cause errors.

⚠ WARNING

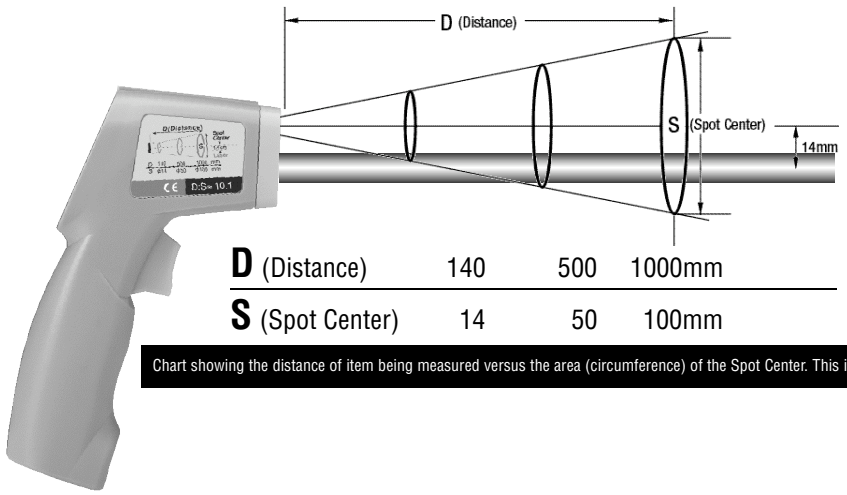
AVOID DIRECT EXPOSURE OF HUMAN EYES TO LASER LIGHT. EYE DAMAGE MAY RESULT. NEVER POINT THE LASER LIGHT AT ANOTHER PERSON. KEEP THE LASER-EQUIPPED UNIT OUT OF THE REACH OF CHILDREN. AVOID INDIRECT EXPOSURE VIA REFLECTIVE SURFACES, SUCH AS GLASS AND MIRRORS.

PARTS AND DESCRIPTION

FIGURE 1



MEASUREMENT FIELD AND TARGET SIZE OPERATING INSTRUCTIONS



D (Distance)	140	500	1000mm
S (Spot Center)	14	50	100mm

Chart showing the distance of item being measured versus the area (circumference) of the Spot Center. This is a 10:1 ratio.

OPERATING INSTRUCTIONS

USING THE LASER POINTER FEATURE

Your Digital Infrared Thermometer is equipped with a laser pointer feature that helps you accurately target the object you are attempting to measure. While pulling the trigger, press the LASER key (FIGURE 1). Repeat to turn the laser pointer feature off.

USING THE BACKLIGHT FEATURE

The back light feature allows you to easily read the LCD display when working in dim conditions. While pulling to trigger, press the BACKLIGHT key (FIGURE 1). Repeat to turn the backlight off.

SETTING THE TEMPERATURE UNITS

With your Digital Infrared Thermometer, you have the flexibility to switch temperature units between ˚F or ˚C. While pulling the trigger, press the F/C key (FIGURE 1) until the desired unit is shown on the LCD.

SETTING THE EMISSIVITY

All surfaces emit thermal radiation. Depending on the temperature, composition and finish of an object, there is a maximum amount of radiation that any given surface can emit. An object that absorbs all (and reflects none) of the radiation falling upon it is called a blackbody and has an emissivity value of 1.0. However, most surfaces are not blackbody emitters and will emit only a fraction of thermal radiation that a blackbody would at the same temperature.

FIGURE 2 lists the emissivity settings you should use for common objects. Depending on the composition of the object you are attempting to measure, you may need to adjust the emissivity setting on your Digital Infrared Thermometer. If you are unsure of which emissivity setting to use, keep in mind that an emissivity setting of 0.95 will cover 90% of typical applications.

FIGURE 2

SUBSTANCE	SET THE EMISSIVITY TO:
Brick (red)	.95
Cement	.95
Concrete	.95
Human Skin	.95
Ice	.95
Marble	.95
Mortar	.90
Sand	.90
Snow	.85
Timber	.90

To select emissivity, pull and hold the trigger and press the MODE key. The default emissivity will show on the LCD. Continue pressing the MODE key (FIGURE 1) until LCD displays desired emissivity setting.

TAKING A TEMPERATURE READING

1. Hold the device by its handle and pull the trigger. There will be a one second delay, and then the LCD will come on.
2. While continuing to pull the trigger, point the IR sensor at the object you are attempting to measure for at least 1 second. Using the laser pointer feature discussed above (confirm location after layout complete) will help ensure accuracy of the reading.
3. Be sure the measured object fills the “spot” seen by the aperture.
4. Note the temperature on the LCD.
5. The device will automatically retain the last temperature reading on the LCD for 5 seconds after the trigger is released.

TROUBLESHOOTING

Problem: The Infrared Thermometer display does not turn on.
The time delay feature means the data appears on the display after 1 second – make sure you provide enough time for this feature. Alternatively, check the battery voltage and replace battery if necessary.

Problem: Dashes appear on the display.
Check the battery voltage and replace battery if necessary.

Problem: Laser comes on, but no data appears on the display.
Measure the surrounding area to your subject to determine if subject exceeds the temperature limit.

BATTERY REPLACEMENT

If the battery voltage falls between 6.5V to 7.5V, a flashing display will indicate that a new battery should be inserted. While reliable readings can still be obtained within the first few hours of the flashing display, it is recommended that you replace the battery as soon as possible.

To replace the battery, open the battery compartment (FIGURE 3A). Remove the old battery and install a new battery (FIGURE 3B). Replace the cover when done.

FIGURE 3A

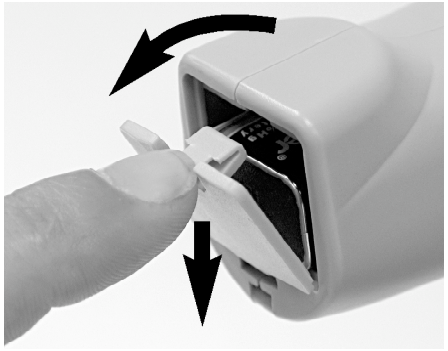
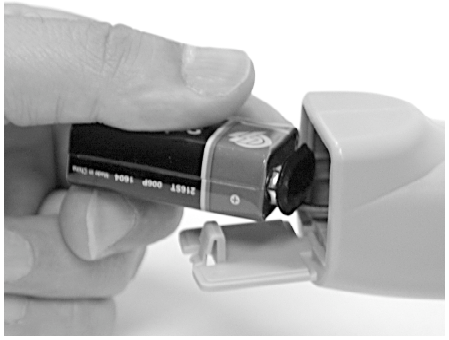


FIGURE 3B



⚠ WARNING

DISPOSE OF ALL BATTERIES IN ACCORDANCE
WITH ALL LAWS AND REGULATIONS OF THE CITY YOU LIVE IN.

MAINTENANCE

Your Digital Infrared Thermometer should always be stored in the protective carrying case provided. This helps keep the lens clean and free of debris which ensure temperature reading accuracy. If the lens is soiled, use low pressure compressed air to remove any debris or soil. If the debris cannot be removed with air, use a soft, slightly damp cotton swab. Only very light pressure should be applied to the lens. Do NOT use any solvents or cleaning agents.

CE CERTIFICATION

Your Digital Infrared Thermometer conforms to the following standards:

EN 50081-1/1992 : EN 55022
EN 50082-1/1997 : EN 55024
(EN 6100-4-2/-3/-8, ENV 50204)

The meter complies with the essential protection requirements of Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.